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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,245	11/04/2003	Yong-Jun Kwak	678-1299 (P10931)	6089

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EXAMINER	
FIGUEROA, MARISOL	
ART UNIT	**PAPER NUMBER**
2617	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/701,245	KWAK ET AL.	
	Examiner	Art Unit	
	Marisol Figueroa	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 December 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. This Action is in response to Applicant's amendment filed on 12/29/2005. Claims 1-12 are still pending in the present application.

Response to Arguments

2. Applicant's arguments filed 12/29/2005 have been fully considered but they are not persuasive.

First, the Applicant argues that in the Jain et al. reference, a desired threshold (i.e. target ROT) is determined by an access network and the access network is a base station, which is a different element from the feature of deciding a target ROT as recited in claim 1 (Page 2, paragraphs 3 and 4 of the remarks). The Examiner respectfully disagrees, on paragraph 0032, lines 3-4 of the Jain et al. that the "access network" is a base station or a base station controller, therefore the base station controller (i.e. RNC) can determine the target ROT which is the same element that is recited in claim 1.

Second, the Applicant argues that in the Jain et al. the "access network" does not adjust the target ROT according to the ROT measurement (Page 3, paragraph 1 of the remarks). The Examiner respectfully disagrees, making reference to figure 3; it is shown on step 192 that the measured ROT is compared to a th_desired threshold (i.e. target ROT) and on steps 194-196 a th_outerloop threshold (i.e. th_desired) is adjusted according to the comparing step 192.

Last, the Applicant argues that the Jain et al. reference does not transit the adjusted target ROT (Page 3, paragraph 2 of the remarks). The Examiner respectfully disagrees, the Jain et al. reference teaches that the adjusted threshold value of the outerloop threshold (i.e. target ROT) is used to compare to a congestion metric and which generates and transmit a congestion bit

accordingly to access terminals (p.0039), therefore it would be inherent that the adjusted outerloop threshold is transmitted to the base station because the base station communicates with the base station controller and transmits the congestion bit to the access terminals (Figure 2; steps 154-156; p.0021, lines 18-21).

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. **Claims 1, 2, 7, and 8** are rejected under 35 U.S.C. 102(e) as being anticipated by **Jain et al. U.S. Publication No. 2002/0193118 A1.**

Regarding claim 1, Jain discloses a method of determining a target noise rise over thermal noise (ROT) for a target cell in a radio network controller (RNC) in a CDMA (Code Division Multiple Access) mobile communication system (P.0038, lines 1-5, 7-11; P.0021, lines 18-21; the access network, e.g. base station in communication with a base station controller and plurality of access terminals, determines a target ROT (TH_OUTERLOOP)) where ROTs in cells measured by each of a plurality of Node Bs within a coverage area of the RNC are maintained equal to or less than target ROTs for the cells (P.0038, lines 11-16; P.0039, lines 1-5; P.0040, lines 14-19; the outerloop threshold (target ROT) is used to correct the available capacity, e.g. maintain measured ROT within a predetermined level, due to interference from neighboring cells), the method comprising the steps of:

receiving a measurement ROT for the target cell from a Node B that controls the target cell (P.0038, lines 10-16);

adjusting a target ROT for the target cell according to a relation between the measurement ROT and the target ROT for the target cell (P.0039, lines 1-10); and

transmitting the adjusted target ROT to the Node B (P.0040, lines 14-19; P.0051; the adjusted threshold (TH_OUTERLOOP) is applied by the congestion control unit of the base station to correct a cell's available capacity).

Regarding claim 2, Jain discloses the method of claim 1, wherein the measurement ROT in the target cell is received periodically (P.0037, lines 1-5; P.0038, lines 10-15).

Regarding claim 7, Jain discloses an apparatus for determining a target noise rise over thermal noise (ROT) for a target cell in a CDMA (Code Division Multiple Access) mobile communication system where ROTs in cells measured by each of a plurality of Node Bs are maintained equal to or less than target ROTs for the cells, the apparatus comprising:

a Node B for measuring ROTs in the target cell and cells neighboring the target cell within a coverage area of the Node B (P.0037, lines 1-2; P.0030, lines 1-9; the access network determines the congestion information or level, e.g. ROT), transmitting the ROTs (P.0038, lines 11-12; the access network measures the ROT), and updating the target ROT for the target cell to an adjusted target ROT (P.0038, lines 1-3, 7-18; P.0039, lines 1-10; the TH_OUTERLOOP (target ROT) is adjusted by comparing it with the measured metric (measured ROT); and

a radio network controller (RNC) for receiving the ROTs, adjusting the target ROT for the target cell according to a relation between the ROTs and preset target ROT for the target cell, and transmitting the adjusted target ROT to the Node B (P.0032, lines 1-5; P.0038; P.0039; P.0040, lines 14-19; the process of adjusting the TH_OUTERLOOP (target ROT) for congestion control in a cell is performed in an access network such as a Base Station or Base Station Controller).

Regarding claim 8, Jain discloses the apparatus of claim 7, wherein the Node B transmits the ROTs periodically to the RNC (P.0037, lines 1-5; P.0038, lines 10-15).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. **Claim 3, 4, 9, and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jain** in view of **Choi U.S. Patent No. 6,295,452 B1.**

Regarding claim 3, Jain discloses the method of claim 1, but fails to disclose wherein the measurement ROT in the target cell is received when the measurement ROT is one of less than and greater than the target ROT by a predetermined threshold. Choi teaches a method for soft handoff in where a mobile station periodically measures the strength of the pilot signal from current and candidate base stations and compare the signals to a preset threshold, if the pilot strength from a candidate base station is greater than a threshold value, the mobile station transmits the measurements results to its base station (col.2, lines 40-52). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to receive the measurement ROT when is less or greater than a predetermined threshold in order to receive only the necessary measurements to adjust the target ROT according to them.

Regarding claim 4, Jain discloses the method of claim 1, wherein the measurement ROT in the target cell is received periodically (P.0037, lines 1-5; P.0038, lines 10-15), but fails to disclose that measurements are received when the measurement ROT is one of less than and greater than the target ROT by a predetermined threshold. Choi teaches a method for soft handoff in where a mobile station periodically measures the strength of the pilot signal from current and candidate base stations and compare the signals to a preset threshold, if the pilot strength from a candidate base station is greater than a threshold value, the mobile station transmits the measurements results to its base station (col.2, lines 40-52). Therefore, it would have been obvious to one having ordinary skill

in the art at the time of the invention to receive the measurement ROT when is less or greater than a predetermined threshold in order to receive only the necessary measurements to adjust the target ROT according to them.

Regarding claim 9, Jain discloses the apparatus of claim 7, but fails to disclose wherein the Node B transmits the ROTs to the RNC if the ROTs are one of less than and greater than the target ROTs by a predetermined threshold Choi teaches a method for soft handoff in where a mobile station periodically measures the strength of the pilot signal from current and candidate base stations and compare the signals to a preset threshold, if the pilot strength from a candidate base station is greater than a threshold value, the mobile station transmits the measurements results to its base station (col.2, lines 40-52). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to receive the measurement ROT when is less or greater than a predetermined threshold in order to receive only the necessary measurements to adjust the target ROT according to them.

Regarding claim 10, Jain discloses the apparatus of claim 7, but fails to disclose wherein the Node B transmits the ROTs to the RNC periodically, and when the ROTs are one less than and greater than the target ROT by a predetermined threshold. Choi teaches a method for soft handoff in where a mobile station periodically measures the strength of the pilot signal from current and candidate base stations and compare the signals to a preset threshold, if the pilot strength from a candidate base station is greater than a threshold value, the mobile station transmits the measurements results to its base station (col.2, lines 40-52). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to receive the measurement ROT when is less or greater than a predetermined threshold in order to receive only the necessary measurements to adjust the target ROT according to them.

7. **Claims 5 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jain** in view of **Einola et al. U.S. Publication No. 2005/0009518 A1.**

Regarding claim 5, Jain discloses the method of claim 1, wherein the measurement ROT is received from the Node B and the adjusted target ROT is transmitted to the Node B using Node B application part signaling messages. Einola teaches that in radio access networks such as UTRAN comprising of a set of Base Stations and Radio Network controllers communicate with each other using signaling messages (P.0005, lines 22-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to transmit the adjusted ROT using signaling messages since is commonly well known that in radio access networks, communication between Base Stations, Radio Network Controllers and MSC is made by signaling messages.

Regarding claim 11, Jain discloses the apparatus of 7, wherein the Node B transmits the ROTs to the RNC and the RNC transmits the adjusted target ROT to the Node B using Node B application part signaling messages. Einola teaches that in radio access networks such as UTRAN comprising of a set of Base Stations and Radio Network controllers communicate with each other using signaling messages (P.0005, lines 22-30). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to transmit the adjusted ROT using signaling messages since is commonly well known that in radio access networks, communication between Base Stations, Radio Network Controllers and MSC is made by signaling messages.

8. **Claims 6 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jain** in view of **Kim et al. U.S. Publication No. 2002/0141349 A1.**

Regarding claim 6, Jain discloses the method of claim 1, but fails to discloses wherein if the measurement ROT is maintained less than the target ROT in the target cell for a predetermined time, the RNC decreases the target ROT, and if the measurement ROT is maintained equal to or

greater than the target ROT in the target cell for the predetermined time, the RNC increases the target ROT. Kim teaches that is typically of a communication system to maintain a ROT near a predetermined value for the transmission in a reverse link to be stable (P.0045). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to decrease the target ROT if the measured ROT is less than the target ROT and increase the target ROT if the measured ROT is greater than the target ROT, in order to make adjustments to the target ROT that guarantees an stable communication system, since an stable system is guarantee when the actual values of ROT in a cell are maintained near a predetermined threshold level.

Regarding claim 12, Jain discloses the apparatus of claim 7, but fails to disclose wherein if the ROT is maintained less than the target ROT in the target cell for a predetermined time, the RNC decreases the target ROT, and if the ROT is maintained equal to or greater than the target ROT in the target cell for the predetermined time, the RNC increases the target ROT. Kim teaches that is typically of a communication system to maintain a ROT near a predetermined value for the transmission in a reverse link to be stable (P.0045). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to decrease the target ROT if the measured ROT is less than the target ROT and increase the target ROT if the measured ROT is greater than the target ROT, in order to make adjustments to the target ROT that guarantees an stable communication system, since an stable system is guarantee when the actual values of ROT in a cell are maintained near a predetermined threshold level.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

10. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marisol Figueroa whose telephone number is (571) 272-7840. The examiner can normally be reached on Monday Thru Friday 8:30 a.m. - 5:00 p.m..

12. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester G. Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

13. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Marisol Figueroa
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